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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/756,549	01/13/2004	Gary Ray Ashton	10011206-1	2672

22879 7590 12/13/2005

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EXAMINER

NGUYEN, HIEN N

ART UNIT	PAPER NUMBER
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2824

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/756,549	ASHTON ET AL.	
	Examiner	Art Unit	
	Hien N. Nguyen	2824	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/3/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/13/04</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Search Report</u> . |

DETAILED ACTION

Claim Objections

Claims 4-5 are objected to because of the following informalities:

- In claim 4, the recitation of “the first resistance and a second, known resistance” is unclear. It appears that the applicant wants to refer to “a first resistance and a second resistance”.
Clarification is needed.
- In claim, the recitation of “the first resistor” should be changed to “the first resistance” in order to correct the antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed

but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claims 1-21 rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Publication NO. 2003/0206512 of Ashton.

Regarding claims 1 and 8, Ashton figures 4 and 5 show a storage device(100) comprising:

an electron emitter (102 or 104) for generating electron beam,
a storage medium (106) comprising an information layer (column 2, paragraph [0017]) having at least a first state and a second state for storing information; and
a resistance measurement system (210) coupled to the storage medium for reading the information stored at the information layer by measuring resistance to determine a state of a storage area on the information layer. Even though the reference did not specifically state "a resistance measurement system" (see figure 4 and 5), it describe a system for measuring the effect of the electrons and measuring a power density between the emitters which render the limitation of resistance (see [0026]).

Regarding claim 2, the storage device of claim 1, further comprising a micromover(110) to change a relative position between the electron emitter (102) and the storage medium (106).

Regarding claim 3, a read signal path (208) is defined between the electron emitter and a storage medium reference, and the resistance measurement system detects a first resistance by measuring the resistance through the storage medium including the storage area along the read signal path.

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Regarding claim 4, the resistance measurement system includes a voltage divider (252, figure 5) that utilizes the first resistance and a second resistance.

Regarding claim 5, the first resistance has a value representative of whether the read signal path passes through a portion of the information layer that is in the first state or the second state (paragraph [0026]).

Regarding claims 6 and 21, a current output signal (254) representative of whether the read signal path passes through a portion of the information layer in the first state or the second state.

Regarding claim 7, a transimpedance amplifier (252) for converting the current output signal to a voltage signal representative of the first state or the second state (see figure5, [0036]).

As for claim 9, the feature of phase change is disclosed in paragraph [0017].

As for claim 10, the phase change material is a Ge--Sb--Te ternary alloy [0028].

As for claim 11, the first state is a crystalline state and the second state is an amorphous state, see paragraph [0028]

As for claims 12-13, the semiconductor layer comprises silicon and metal [0030].

As for claim 14, and 19, a control system is a system (202) of figures 4 and 5.

As for claim 15, the function of reading is described in paragraph [0026].

As for claim 16, the function of writing is described in paragraph [0036].

As for claim 18 and 20, the same semiconductor feature is described in paragraph [0031].

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

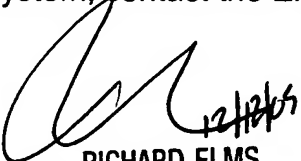
Gibson (6,473,388), Raese (Pub US 2003/0086352) and Spencer (Pub US 2005/0086471) are cited as of interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien N. Nguyen whose telephone number is (571) 272-1879. The examiner can normally be reached on Monday through Thursday 9:30 AM to 7:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

H. Nguyen 
December 9, 2005


RICHARD ELMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800